CLAIMS

What is claimed is:

1. A network comprising:

a plurality of network nodes;

a plurality of routing devices to route network traffics between selected ones of said network nodes;

a plurality of sensors, either integrally disposed in a subset of said routing devices or externally disposed and coupled to the subset of routing devices, to monitor and report on network traffic routed through the subset of routing devices; and

a director coupled to said sensors to receive network traffic information from said sensors for said subset of routing devices, and to determine in response whether moderating actions are to be taken to moderate an amount of network traffic destined for at least one of said network nodes, based at least in part on some of said network traffic information received from said sensors.

2. The network of claim 1, wherein the sensors are equipped to periodically gather data denoting at least amount of network traffic routed through said subset of routing devices, said data including destinations of said network traffic.

3. The network of claim 1, wherein the sensors are equipped to periodically report to said director data denoting at least amount of network traffic routed through said subset of routing devices, said data including destinations of said network traffic.

4. The network of claim 1, wherein the sensors are equipped to facilitate application of desired moderation on network traffic through selected ones of said subset of routing devices.

5. The network of claim 1, wherein the director is further employed to determine in response moderating actions to be taken, including where the moderating actions are to be taken, if the director determines that moderating actions are to be taken to moderate the amount of network traffic.

6. The network of claim 1, wherein the director is further employed to determine in response whether moderating actions are to be relaxed for the at least one of the network nodes, based at least in part on some of said network traffic reports received from said sensors.

7. The network of claim 6, wherein the director is further employed to determine in response moderation relaxation actions to be taken, including where the moderation relaxation actions are to be taken, if the director determines that moderation relaxation actions are to be taken to relax moderation on the amount of network traffic.

8. The network of claim 1, wherein the director is further employed to determine in response whether filtering actions are to be taken for the at least one of the network nodes, based at least in part on some of said network traffic reports received from said sensors.

9. The network of claim 8, wherein the director is further employed to determine in response where the filtering actions are to be taken, if the director determines that filtering actions are to be taken to filter out network traffic.

10. The network of claim 8, wherein the sensors are equipped to facilitate application of desired filtering on network traffic through selected ones of said subset of routing devices.

11. The network of claim 1, wherein the director comprises a plurality of director devices corresponding to a plurality of network domains to facilitate said receipt of information on network traffic from sensors in the corresponding network domains, and to incorporate the network traffic information of the different domains in said determination of moderating actions.

12. A method comprising:

routing network traffic to and from a plurality of network nodes of a network;

monitoring and reporting on a portion of said network traffic routed through a plurality of routing devices distributively disposed in the network; and

determining whether moderating actions are to be taken to moderate an amount of network traffic destined for at least one of said network nodes, based at least in part on some of said network traffic reports received for said routing devices.

13. The method of claim12, wherein said monitoring comprises periodically gathering data denoting network traffic routed through said routing devices, said data including destinations of said portion of network traffic.

14. The method of claim 12, wherein said reporting comprises periodically reporting on data denoting said portion of network traffic routed through said routing devices, said data including destinations of said portion of network traffic.

15. The method of claim 12, wherein said method further comprises facilitating application of desired moderation on network traffic passing through selecting ones of said routing devices.

16. The method of claim 12, wherein said method further comprises determining moderating actions to be taken, including where the moderating actions are to be taken, if it is determined that moderating actions are to be taken to moderate the amount of network traffic destined for a network node.

17. The method of claim 12, wherein the method further comprises determining in response whether moderating actions are to be relaxed for the at least one of the network nodes, based at least in part on some of said network traffic reports received from said sensors.

18. The method of claim 17, wherein the method further comprises determining in response moderation relaxation actions to be taken, including where the moderation relaxation actions are to be taken, if it is determined that moderation relaxation actions are to be taken to relax moderation on the amount of network traffic destined for a network node.

19. The method of claim 12, wherein the method further comprises determining in response whether filtering actions are to be taken for the at least one of the network

nodes, based at least in part on some of said network traffic reports received from said sensors.

20. The method of claim 19, wherein the method further comprises determining in response where the filtering actions are to be taken, if it is determined that filtering actions are to be taken to filter out network traffic destined for a network node.

21. The method of claim 19, wherein the method further comprises facilitating application of desired filtering on network traffic through selected ones of said subset of routing devices.

22. The method of claim 12, wherein said sensing is performed using a collection of hierarchically organized devices.

23. The method of claim 12, wherein said determining is performed using a collection of hierarchically organized devices.

24. An apparatus comprising:

(a) a storage medium having stored therein a plurality of programming instructions designed to implement (a.1) a requestor to request a routing device of a network for data denoting network traffic routed through saidrouting device, and to request alteration of routing operations of said routing device to moderate an amount of network traffic going through said routing device, (a.2) a reporter to report said data denoting network traffic routed through saidrouting device, and (a.3) a regulator to control submission of said network traffic moderation routing operation alteration requests to saidrouting device, responsive to moderation instructions provided; and

(b) a processor coupled the storage medium to execute the programming instructions.

25. The apparatus of claim 24, wherein the apparatus further comprises a communication interface coupled to the processor, to couple the apparatus to said routing device and to facilitate submission of said network traffic moderation routing operation alteration requests to saidrouting device.

26. The apparatus of claim 24, wherein the apparatus further comprises a communication interface coupled to the processor, to couple said apparatus to a director that determines whether moderate actions are to be taken to moderate an amount of network traffic, based on said data reported, to facilitate reporting of said data to said director.

27. The apparatus of claim 26, wherein the apparatus further comprises a communication interface to couple the apparatus to at least one of a plurality of hierarchically organized director devices coupled to each other to facilitate data collection, analysis and traffic regulation.

28. The apparatus of claim24, wherein the requestor is further used to request alteration of routing operations of said routing device to relax moderate an amount of network traffic going through said routing device.

29. The apparatus of claim24, wherein the requestor is further used to request filtering operations of said routing device to filter out network traffic going through said routing device.

30. A networking apparatus comprising:

a first functional unit to route network traffic;

a second functional unit coupled to the first functional unit to gather data denoting network traffic routed through arouting device, and to apply moderating actions to said first functional unit to moderate network traffic going through said networking apparatus;

a third functional unit coupled to the second functional unit to report said data; and

a fourth functional unit coupled to the second functional unit to control application of said moderating actions to said first functional unit to effectuate a desired moderation of network traffic going through said networking apparatus , responsive to moderation instructions provided.

31. The networking apparatus of claim 30, wherein the networking apparatus further comprises a communication interface coupled to the fourth functional unit, to couple said networking apparatus to a director that determines whether moderate actions are to be taken to moderate an amount of network traffic, based on said data reported, to facilitate reporting of said gathered data to said director.

32. The networking apparatus of claim 30, wherein the second functional unit is further used to relax moderating actions applied to the first functional unit to relax moderating an amount of network traffic going through said routing device.

33. The networking apparatus of claim30, wherein the second functional unit is further used to cause the first functional unit to filter out network traffic going through said networking apparatus.

34. An apparatus comprising:

(a) a storage medium having stored therein a plurality of programming instructions designed to implement a director to receive reporting of data denoting network traffic routed through a plurality of routing devices of a network, and to determine in response whether moderating actions are to be taken to moderate an amount of network traffic destined for at least one of a plurality of network nodes of said network, based at least in part on some of said reported data; and

(b) a processor coupled the storage medium to execute the programming instructions.

35. The apparatus of claim34, wherein said programming instructions are designed to determine whether a moderation threshold has been reached for a network node, based at least in part on some of said reported data.

36. The apparatus of claim35, wherein said programming instructions are further designed to determine moderating actions to be taken, including where the moderating actions are to be taken, if it is determined that moderating actions are to be taken to moderate an amount of network traffic.

37. The apparatus of claim 34, wherein the apparatus further comprises a communication interface coupled to the processor, to couple the apparatus to a plurality of sensors to receive said data reporting.

38. The apparatus of claim34, wherein the director further determines whether moderating actions being applied are to be relaxed, based at least in part on some of said reported data.

39. The apparatus of claim 34, wherein the director further determines whether filtering actions are to be taken to filter out network traffic, based at least in part on some of said reported data.